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09/955,796	09/18/2001	Ed O. Schlotzhauer	10010804-1	1044

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EXAMINER	
WEST, JEFFREY R	

ART UNIT	PAPER NUMBER
2857	

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

BJC

Office Action Summary	Application No.	Applicant(s)	
	09/955,796	SCHLOTZHAUER ET AL.	
	Examiner	Art Unit	
	Jeffrey R. West	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29 and 31-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29 and 31-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 7-9, 14-29, 31-33, and 36-40 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,907,557 to Perez et al. (incorporating by reference U.S. Patent No. 6,401,220 to Grey et al.).

MPEP §2163.07(b) [R-3]: Incorporation by Reference: Instead of repeating some information contained in another document, an application may attempt to incorporate the content of another document or part thereof by reference to the document in the text of the specification. The information incorporated is as much a part of the application as filed as if the text was repeated in the application, and should be treated as part of the text of the application as filed.

With respect to claim 1, Perez discloses a method for a user of a measurement process to cause a variation in the measurement process (Grey et al.; column 2, lines 55-60 and column 11, lines 36-40), the measurement process comprising a sequence of operations controlled by a computer program (Grey et al.; column 11, lines 41-56 and column 12, lines 6-15) containing a variation point at which a function call instruction is

inserted by a designer of the computer program (Grey et al.; column 12, lines 41-53) to pass control to a user-defined variation function (Grey et al.; column 14, lines 52-65), said method comprising determining the variation to the measurement process (Grey et al.; column 13, lines 50-58), providing a user-generated process modification software module comprising the user-defined variation function for causing the variation (Grey et al.; column 12, lines 41-53 and column 14, lines 52-65), and associating the function call instruction with the user-defined variation function prior to execution of the measurement process, wherein the function call instruction passes control to the user-defined variation function when the variation point in the computer program is reached (Grey et al.; column 13, lines 50-58 and column 14, line 52 to column 15, line 9).

Perez also discloses that the user is permitted to modify the measurement process by configuring parameters (Perez et al.; column 4, lines 49-63 and column 10, line 57 to column 11, line 14), such as the parameters used through the user-defined variation function (Grey et al.; column 14, lines 52-65), while preventing the user from modifying the measurement process other than through the user-defined variation function (Perez et al.; column 4, lines 49-63 and column 10, line 57 to column 11, line 14).

With respect to claims 2-4 and 31-33, Perez discloses that the process modification software module further comprises an interface servicing element that services an interface realized by the measurement process with

the interface operating at a binary protocol (Grey et al.; column 13, lines 7-15).

With respect to claims 7 and 36, Perez discloses that said interface is determined by the user and is identified and passed into said measurement process (Grey et al.; column 13, lines 7-30).

With respect to claims 8 and 37, Perez discloses that said process modification software module is one of a computer program conforming to a software component specification for distributed applications or dynamically linked library (i.e. C, C++, JAVA, Visual Basic) (Grey et al.; column 13, lines 53-57 and column 14, lines 66-67).

With respect to claim 9, Perez discloses that the measurement process and the process modification software module are executed in a shared computer memory space (i.e. the test executive software performs the measurement and the measurement modification) (Grey et al.; column 11, lines 41-56 and column 58, lines 60-67)

With respect to claims 14-18 and 24-28, Perez discloses that said variation comprises modification of data (Grey et al.; column 15, lines 11-14) received from the variation function including one or more numerical parameters (i.e. voltages) (Grey et al.; column 30, lines 49-52 and column 46, lines 30-35), selectable alternatives of control parameters (Grey et al.; column 19, lines 33-39), alteration of a configuration of the device under test (Grey et al.; column 18, lines 62-63), or causing input signals to be supplied to the

device under test (Grey et al.; column 10, line 62 to column 11, line 6 and column 19, line 64 to column 20, line 5).

With respect to claim 21, Perez discloses a computer readable medium containing program instructions, generated by a program designer, for carrying out the associated method (Grey et al.; column 11, lines 41-56).

With respect to claims 22 and 23, Perez discloses passing measurement data to the function call (Grey et al.; column 14, lines 37-50).

With respect to claim 29, Perez discloses that the function call instruction invokes an interface (Grey et al.; column 12, lines 41-47).

With respect to claims 19, 20, and 38, Perez discloses a plurality of variation points that access the user for the reception of measurement data using a plurality of application programming interfaces wherein the measurement data is provided by a plurality of user-defined variation functions (i.e. the user-defined variation functions are applicable anywhere in the sequence as well as in multiple concurrently executed sequences) (Grey et al.; column 13, lines 16-25 and 32-44 and column 14, lines 52-65).

With respect to claim 39, since the function calls disclosed by Perez are in the instruction code, operable to control the measurement process at a variation point in the code, and allows corresponding user input to modify the measurement process, it is considered inherent that the designer of the instruction program has anticipated that the user may want to interact with or modify the measurement process because the designer of the code would

have eliminated the possibility of user intervention and would not have provided user prompts if such interaction was not desired.

With respect to claim 40, Perez discloses a measurement system comprising a physical interface operable to supply signals to a device under test and receive signals from a device under test (Grey et al.; column 10, line 51 to column 11, line 34).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 5, 6, 10-13, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perez in view of U.S. Patent Application Publication No. 2002/0026514 to Ellis et al.

As noted above, the invention of Perez teaches many of the features of the claimed invention and while Perez does teach connecting the process-modifying host computer to a plurality of specific test instruments (Grey et al., Figure 1) Perez does not specifically indicate that the measurement and process modification be carried out using two separate computers communicating using a Simple Object Access Protocol or Common Object Request Broker Architecture protocol.

Ellis teaches automated tool management in a multi-protocol environment comprising measuring/polling software located on a server computer system with corresponding processor and memory (0025) and user process control software (0007) located on a separate remote computer (0023), wherein the process control software and the monitoring/polling software communicate over a network using predetermined protocol including Common Object Request Broker Architecture and Simple Object Access Protocol (0007).

It would have been obvious to one having ordinary skill in the art to modify the invention of Perez to include specifying that the measurement and process modification be carried out using two separate computers communicating using a Simple Object Access Protocol or Common Object Request Broker Architecture protocol, as taught by Ellis, because, as suggested by Ellis, the combination would have provided improved analysis and control by allowing input and diagnostics by a larger variety of users through remote access (0005 and 0008).

Response to Arguments

5. Applicant's arguments with respect to claims 1-29 and 31-40 have been considered but are moot in view of the new ground(s) of rejection.

The following arguments, however, are noted:

Applicant argues:

"The test executive itself does not define a measurement process and so it is not equivalent to the computer program of claim 1. The test executive is a tool by which a user may define a measurement process. It is the user that

generates the test sequence (using sequence editor 212 in Fig. 2). Thus, if any variation is made to the test sequence, the variation is made at points determined by the user. This is in contrast to claim 1, in which the variations points are inserted by the designer of the computer program. The point in the test executive where the user-defined test sequence is called is not equivalent to a variation point, since the test executive is not a computer program defining a measurement process."

The Examiner maintains that the variation point is a point in the test sequence execution (i.e. program defining a measurement process) in which a function call passes control to a user-defined variation function. Perez/Grey discloses this process in column 13, lines 50-58 and column 14, lines 52-61 of Grey, specifically:

"Most steps in a TestStand sequence invoke code in another sequence or in a code module. When invoking code in a code module, TestStand must know the type of the code module, how to call it, and how to pass parameters to it. The different types of code modules include LabVIEW VIs, C functions in DLLs, and C functions in source, object, or library modules that are created in LabWindows/CVI or other compilers. TestStand also must know the list of parameters that the code module requires." (column 13, lines 50-58)

"In TestStand, the values of variables and properties can be used in numerous ways, such as passing a variable to a code module or using a property value to determine whether to execute a step. Sometimes the user desires to use an expression, which is a formula that calculates a new value from the values of multiple variable or properties. An expression can be used anywhere a simple variable or property value is used. In expressions, the user can access all variables and properties in the sequence context that is active when TestStand evaluates the expression." (column 14, lines 52-61)

Applicant then argues:

"Claims 1 and 21 have been amended to clarify that the user is prevented from modifying the (designer-defined) measurement process other then through the user-defined [the] variation function. The variation points in the program at which the variation functions are called may not be inserted by the user. This amendment is supported by the specification on page 4, lines 6-14, and page 14, lines 10-15, for example. Further, the methods for performing the call-out to the variation function (page 12, line 3 to page 13,

line 16, for example) are those used for combining executable codes. Providing the user with executable code rather than source code (page 4, lines 6-14) is one mechanism for preventing the user from invalidating the measurement process.

Applicant submits that this element distinguishes the claims from the Grey reference. In the Grey reference, the user is not prevented from modifying a sequence of steps, even if that sequence of steps were itself generated by another user or developer. This is clarified in column 28, lines 9-36 (and Figure 9), which states that user creates the test sequence, and also in Figure 2, (column 12, lines 55-64) where a sequence editor 212 is provided to allow the user to create, modify and debug sequences"

The Examiner asserts that this argument is considered to be moot in view of the new grounds of rejection presented above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

U.S. Patent No. 6,449,741 to Organ et al. teaches a single platform electronic tester including an operator tool allowing protection to prevent unauthorized access to tools that allow modification of a test program (column 14, lines 14-17).

U.S. Patent No. 6,769,114 to Leung teaches methods and apparatus for preventing software modification from invalidating previously passed integration tests.

U.S. Patent Application Publication No. 2003/0046665 to Ilin teaches a reusable software component for textually supplementing, modifying,

evaluating, and processing procedural logic for a compiled host program at run-time.

U.S. Patent No. 6,766,514 to Moore teaches a compiler having real-time tuning, I/O scaling and process test capability.

U.S. Patent No. 6,351,843 to Berkley et al. teaches dynamically inserting a function into an application executable at runtime.

U.S. Patent No. 6,202,043 to Devoino et al. teaches a computer based system for imaging and analyzing a process system and indicating values of specific design changes.

U.S. Patent No. 6,163,879 to Mackey teaches an interface and method for facilitating writing and modifying of lines of programming code.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action.

In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (703)308-1309. The examiner can normally be reached on Monday through Friday, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703)308-1677. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

jrw
January 19, 2006